

SOME NEW COMPOSITAE FROM PERU

BY JOSÉ CUATRECASAS

Smithsonian Institution, U. S. National Museum, Washington

The 1962 Smithsonian expedition conducted by Dr. J. J. Wurdack in the region of Chachapoyas, Peru, has resulted in a great number of novelties for the Andean flora. This paper is a continuation of my contributions to the study of the *Compositae* collected in that trip. It includes descriptions of seven species belonging to *Senecio*, *Eupatorium*, *Mikania*, *Pappobolus* and *Vernonia* and a new genus (*Ascidogyne*) of the *Eupatorieae*. Two new species are named in memory of the distinguished botanist and friend Robert E. Woodson. The work on which this paper is based has been sponsored by the National Science Foundation, Washington, D.C.

Senecio woodsonianus Cuatr., sp. nov.

Herba robusta perennis usque ad 1 m alta caulibus erectis striatis basi subteretibus 1 cm diametentibus sursum ramosis ramis striatis ad 30 cm longis foliatis et floribundis. Caules et ramuli dense glanduloso-hirtuli et albido-arachnoidei pilis patulis crassiusculis pluricellularibus basi ampliatis apice minute capitato-glandulosis copiose tecti et praecipue in juvenile pilis similibus sed apice longissime sericeo-setoso indumento arachnoideo denso vel sparse instructis.

Folia alterna crasse herbacea rigidula sessilia oblonga apice acuta mucronulataque basi ampliata amplexentia auriculato-sagittata margine revoluta breviter dentata denticulis minutis calloso-mucronulatis, 4-7 cm longa 0.4-1.2 cm lata, nervo medio tantum conspicuo supra tenui subtus valde eminenti, utrinque dense hirtoglandulosa in juvenilia cinereo-lanuginosa vel cinereo-arachnoidea in adulta tantum subtus tomento lanuginoso supra glandulosum disposito.

Inflorescentiae paniculatae terminales plus minusve pendulae axi ramulisque striolatis flexuosis dense hirsutulo-glandulosis in sicco ferrugineis vel lutescentibus bracteis subtendentibus oblongis sessilibus sursum decrescentibus. Pedicelli flexuosi 1-2 cm longi hirtoglandulosi sursum bracteolis linearibus acutis 12-8 mm longis circa 1 mm latis instructis. Capitula discoidea campanulata 12-13 mm alta 8-10 mm lata. Involucrum circa 10 mm altum lutescenti-viride 13-15 (-21) phyllariis crasse herbaceis lanceolato-linearibus acutis extus glanduloso-hirtis pilis pluricellularibus capitulato-glandulosis ad 1 mm longis interioribus circa 10 mm longis 3-4 mm latis marginibus scariosis exterioribus 10×2 mm. Calyculum 5-7 bracteolis linearibus acutis 8-10 mm longis 1-1.2 mm latis ad extremum pedicelli instructis. Flores omnes hermaphroditi 45-77 in capitulo corolla lutea glabra 8-10 mm longa tubulo 3.5-4.7 mm longo limbo tubuloso dentibus triangulari-oblongis 0.8-1 mm longis acutis sursum minute papillosis. Antherae 2.5 mm longae basi auriculatae. Rami styli crassi circa 1.6 mm longi marginibus intusque stigmato-papilloso apice convexo-truncati minute papilloso penicillato-coronati extus leviter papilloso-granulati.

Achaenia oblonga 3 mm longa 10-costata costis breviter strigoso-hispidulis. Pappus 8-9 mm longus albus setis capillaribus pluriseriatis sericeis minute strigulosis. Receptaculum (4-) 5-6 (-6.5) mm diametente marginibus alveolorum breviter dentatis.

Typus: Peru, Dept Amazonas, Prov Chachapoyas: approaches to Cerro Campanario, NNE of Diosán, 3200-3500 m alt, locally frequent, flowers pale yellow, 3 Aug 1962, J. J. Wurdack 1954. Holotypus, US; isotypus, LIMA.

Senecio woodsonianus is closely related to *S. neoglandulosus* Cuatr. also a Peruvian species, but it differs by having discoid, larger heads, as well as larger flowers and leaves. *S. neoglandulosus* also has an arachnoid indument but only obvious on the underside of young leaves. Another related species is *S. chavanilloensis* Cuatr., which is distinguished by its radiate heads and flat, dentate leaves.

Eupatorium ventillanum Cuatr., sp. nov.

Suffrutex usque ad 40 cm alta caulibus teneris ramosis tortuosis saepe inferne radicanibus superne foliatis floriferisque inclinatis vel pendulis. Rami juveniles patulo-puberuli denique glaberrimi leviter striolati.

Folia opposita membranacea laete-viridia petiolata. Lamina lanceolata apicem versus attenuata acuta basi cuneata, margine inferiore parte excepto serrulata dentibus 6-8 utroque latere 2-5 cm longa 0.3-1.4 cm lata, triplinervia supra viridis costa duobusque nervis lateralibus leviter prominulis minute sparseque strigulosis reliqua glabra nervulis secundariis tenuibus vel obsoletis, subtus pallidior costa nervisque lateralibus prominulis pilosis et calloso-granulatis cetera superficie puberula pilis acutis flexuosis nervis secundariis 2 paribus ascendentibus venulis minutum discolorem reticulum formantibus. Petiolus 4-10 mm longus saepe flexuosus basi vaginato-ampliatus pilis patulis basi incrassatis copiose munitus.

Inflorescentia terminalis laxa paniculata 3-6 cm longa lataque axi ramisque teneribus hirto-pubescentibus pilis pluricellularibus acutis violaceis. Bracteolae subtendentes anguste lineares tenerae pilosae 2-4 mm longae. Pedicelli capillares 4-15 mm longi pubescentes erecti vel flexuosi 1-3 bracteolas gerentes.

Involucrum campanulatum 4-5 mm altum 2.2-3 mm diametente basi incrassato-rotundatum, phyllariis 13-15 subaequalibus subbiseriatis 3-4 mm longis 2-3 exterioribus paulo brevioribus 0.6-1.1 mm latis subscariosis linearibus acutis trinervatis margine plus minusve scariosis ciliatis dorso viridi sparsis pillis. Flores omnes hermaphroditi 20-29 in capitulum. Corolla alba 3.5-4.5 mm longa tubulo 1.5-2 longo glabro limbo subcampanulato sursum ampliato subglabro vel in lobis parcissimis pilis lobis 0.3-0.5 mm longis triangularibus intus minute papillosis. Antherae 0.8 mm longae. Rami styli 2 mm longi divaricati appendicibus albis densissime stigmato-papillosis. Achaenia nigra oblonga pentagona basi callosa angulis ciliatis. Pappus albus circa 3 mm longus setis uniseriatis strigosis. Receptaculum planum nudum glabrum minute foveolatum.

Typus: Peru, Dept Amazonas, Prov Chachapoyas: scrub forest along Río Ventilla, 1-2 km W of Molinopampa, 2350-2400 m alt, locally abundant in colonies on river banks. flowers white, 23-22 July 1962, J. J. Wurdack 1476. Holotypus, US; isotypus LIMA.

Eupatorium ventillanum belongs to the section *Eximbricata* (DC.) Hoffm. and is very close to the species under numbers 63-65 of Robinson's treatment of the Peruvian *Eupatoria*. The new species may be distinguished by its more slender habit, the branches usually bending, by the more narrower, lanceolate, slender leaves with broader and more acute serrature, by the smaller size of the heads and flowers, the looser inflorescences, the longer pedicels and different kind of hairs.

Eupatorium chachapoyasense Cuatr., sp. nov.

Frutex 0.5-1.5 m altus ramis terminalibus foliatis densis plus minusve glandulosis spisse lanuginosis cinereis vel griseis vetustis robustis glabratis fissurato-striolatis brunnescentibus.

Folia opposita rigide crasseque coriacea petiolata. Lamina ovata vel lanceolato-ovata apice acuta basi rotundata margine basim excepto leviter revoluta breviter serrato-crenata crenaturis granulo calloso albo instructis 3-6 cm longa 1.5-3.5 cm lata, supra viridis glandulosa leviter elevato-reticulata nitidissima, subtus cinerea vel ochroleuca crasse densissimeque lanata tomento compressissimo tecta costa elevata plus minusve glabrata emergenti nervis secundariis 4-5 utroque latere patulis cum tomento velatis sed plus minusve visibilibus. Petiolus 1-2 cm longus glanduloso-resinosus lanatusque.

Inflorescentiae corymboso-paniculatae terminales folia plus minusve excedentes ramulis paucicapitatis crassiusculis glandulosis dense lanatis griseisque erectis vel subpendulis. Pedicelli 2-12 mm longi crasse spisseque lanati. Bractee subtendentes anguste lineares 8-12 mm longae. In apice pedicellorum plerumque tantum una bracteola anguste lineari 7-8 mm longa ad involucrem adpressa instructa. Capitula crassa campanulata 9-10 mm longa circa 6 mm lata. Involucreum circa 8 mm altum glanduloso-resinosum lanatisque cinerascens, phyllariis circa 4-seriatis subaequilongis 6-7 mm longis interioribus tenuibus oblanceolatis basin versus attenuatis circa 1 mm latis subglabris, mediis exterioribusque crassiusculis rigidiusculis oblongo-lanceolatis sursum gradatim acutatis margine eroso-ciliato extus breviter sed densiuscule lanuginosis. Flores hermaphroditi 35-50 in capitulo, corolla purpurascens glabra glandulis globosis sparsis munita 4.7-5.8 mm longa tubulo circa 1.5 mm longo limbo tubuloso leviter inflato infra lobis leviter constricto dentibus oblongo-triangularibus 0.8-1 mm longis. Antherae 1.5 mm longae basi obtusae. Stylus inferne glaber ramis 3-4 mm longis linearibus obtusis papillosis. Ovarium anguste prismaticum pentagonum basim versus angustatum sparse setulosum. Pappus circa 5 mm longus setis scabrosis 1-2-seriatis robustis complanatis basi coalitis apice acutis sursum paulo dilatatis valde inaequilongis brunneo-stramineis. Receptaculum leviter convexum nudum 2-3 mm diametente.

Typus: Peru, Dept Amazonas, Prov Chachapoyas: uppermost slopes and summit of Cerros de Calla-Calla, nr kms 403-407 of Balsas Leimebamba road, 3400-3500 m alt, 18 July 1962, J. J. Wurdack 1703. Holotypus, US; isotypus, LIMA.

Eupatorium chachapoyasense belongs to the section *Eximbricata* having a pluriserial involucre with the phyllaries of uniform length. It is a striking species on account of its thick heads and rather robust pappus bristles, in addition to the

thick coriaceous, underneath lanate leaves. It is closely related to *E. prunifolium* H.B.K. from Ecuador, but it is readily distinguished by its larger heads with a higher number of flowers, by its more ovate leaves and by the thick, compact, lanate tomentum on the branches and under surface of the leaves.

Mikania violaefolia Cuatr., sp. nov.

Suffrutex scandens usque ad 2 m longa ramis volubilis tortuosis contortisque intricatis striolatis atroviolaceis glaberrimis nitidisque. Stipulae interfoliales laciniatae basi amplectentes laciniis lineari-subulatis 1-4 mm longis.

Folia opposita chartacea vere carnosula petiolata. Lamina ovato-cordata vel triangulari-cordata apice subobtusa vel subacuta breviter mucrone calloso-indurato basi profunde cordata sinu aperto vel cum lobis basalibus rotundatis vel obtuse deltoideis tegentibus margine leviter revoluta subintegra vel in juvenilis 2-3 dentibus utroque latere minutis calloso-mucronulatis in adultis granulis callosis distantibus fere obsoletis, 0.6-4 cm longa 0.5-3 cm lata, supra viridis glabra laevis plerumque tantum costa conspicua ceteris nerviis obsoletis, subtus plerumque purpurascens glabra vel subglabra minutissimis sparsissimis pilis vel granulis munita, quintuplinervia, nervis 5 crassiusculis purpuraceis glabris nervulis venulisque minutum reticulum saepe discolorem formantibus. Petiolus 0.5-2.5 cm longus purpurascens glaber basi ampliato-vaginatus amplectens.

Inflorescentiae cymoso-corymbosae terminales pedunculatae pendunculo glabro 3-6 cm longo sed aliquando longissimo (15 cm) flexuosoque tantum basi bifoliati, axi ramulisque erecti vel tortuosi striato-angulati glabri bracteolis sparsis viridibus vel violascentibus 3-8 mm longis 1.5-3 mm latis. Pedicelli 1-8 mm longi mediocres glabri vel minutissimis sparsis obsoletis pilis adpressis circa apicem bracteola lanceolato-oblonga acutata 5-6 mm longa 1.5 mm lata ad involucrem adpressa. Capitula cylindracea 8-10 mm longa circa 3 mm lata. Involucrem 8-9 mm longum, 4 phyllariis 7-8 mm longis 2.2-2.5 mm latis oblongis acutis margine hyalinoscarioso apicem versus eroso-ciliato dorso olivaceo-viridi glabro nervis obsoletis. Flores 4, corolla alba glabra circa 6 mm longa tubulo 3 mm lobis triangulari-oblongis sursum minutissime papilloso-granulatis 1.5 mm longis. Antherae atrae apice appendiculatae 1.9 mm longae. Styli dense translucide papilloso ramis 4.5-6 mm longis anguste linearibus obtusis minute stigmato-papilloso contortis. Achaenia matura 4 mm longa prismatico 5-angulato-costata glabra. Pappus 5 mm longus albidus (pallide stramineus) setis inaequalibus pluriseriatis rigidis strigosis.

Typus: Peru, Dept Amazonas, Prov Chachapoyas: middle eastern Calla-Calla slopes, nr kms 416-419 of Leimebamba-Balsas road, 2900-3100 m alt, vine 1-2 m in shrubs, occasional, flowers white, 9 July 1962, J. J. Wurdack 1257. Holotypus, US; isotypus, LIMA.

Mikania violaefolia is closely related to *M. brachyphylla* Hieron., but it differs by its larger, 5-nerved leaves which are glabrous (not scabrid) above and on the main veins beneath, by the glabrous or subglabrous pedicels and involucre and by the white-stramineous pappus. The minute papillose pubescence covering the undivided part of the style is an outstanding feature of the new species.

Mikania bulbisetifera Cuatr., sp. nov.

Frutex scandens usque ad 2.5 m longus ramis foliosis subteretibus striolatis ochraceo-viridibus densiuscule longe hirsuto-villosis pilis pluricellularibus acutis basi bulbosis 3-4 mm longis patulis vel flexuosis exstipulatis.

Folia opposita crasse chartacea penninervia breviter petiolata. Lamina oblongo-lanceolata basi rotundata vel obtusa apice acutissima margine leviter incurvato grosse subserrata dentibus calloso-mucronatis circa 2 mm patentibus 6-12 mm inter se distantibus, 5-10 cm longa 1.5-3.5 cm lata, supra viridis sparse pilosa granulataque tantum costa dense villosa bene conspicua ceteris nervis obsolete subtus olivacea copiose hirsuto-villosa pilis longis basi bulbosis seu tuberculatis, costa prominenti densissime villosa nervis lateralibus circa 3 utroque latere curvato-ascendentibus prominentibus nervulis reticulatis prominulis. Petiolus 5-12 mm longus crassiusculus basi dilatato-vaginatulus amplectens dense hirsuto-villosus.

Inflorescentiae thyrsoido-paniculatae terminales et axillares 15-20 cm longae, ramis patulis striolatis longe densiuscule hirsuto-setosis. Pedicelli graciles erecti setosi 2-6 mm longi. Bractae lanceolatae acutae 4-6 mm longae 1-1.5 mm latae parce puberulae. Capitula matura 8-9 mm longa involucri 7.5 mm alto phyllariis 6.5-7 mm longis 1.5-2 mm latis oblongis sursum attenuatis acutiusculis basi incrassatis margine plus minusve hyalino-scariosis ciliatisque apice etiam ciliato ceteris glabris minute obsoleteque venoso-striolatis. Bracteola ad apicem pedicelli 4-5 mm longa 1.2-1.5 mm lata sublanceolata ad involucri adpressa. Flores 4 hermafroditici corolla alba 4.6-5 mm longa ad apicem dentibus parvis longis ciliis cetera glabra tubo 1.5-1.8 mm longo lobis 1.5 mm longis oblongis margine incrassatis apice acuto minutissime papillosulo plus ciliato. Antherae 2 mm longae. Stylus glaber ramis ad 3 mm longis linearibus stigmatibus papillosis contortis vel patulis. Achaenia prismaticae pentagonae 3.5 mm longae glabrae. Pappus 5 mm longus setis strigosis rigidis sursum leviter ampliatis.

Typus: Peru, Dept Amazonas, Prov Bongará: Jalca zone along Yambasbamba-Pomacocha trail between Yanayacu and Pomacocha, 2300-2400 m alt, vine 1-2.5 m, in shrubs, occasional, flowers white, 26 June 1962, J. J. Wurdack 1078. Holotypus, US; isotypus, LIMA.

Mikania bulbisetifera is very characteristic by its abundant, villous-hirsutous indument of very long, bulbous hairs, by its oblong-lanceolate, serrate leaves and by its ciliate corolla-tips. It is closely related to *M. lasiopoda* Rob., which has entire leaves, almost glabrous above and smaller heads and flowers.

Pappobolus woodsonianus Cuatr., sp. nov.

Frutex circa 1 m altus ramulis terminalibus foliatis albo-lanatis et resinosis glandulosis granulis resinosis luteis nitidis intra lanam copiosis, vetustis glabrescentibus vel glabris griseis striolatis et nodosis nodis 5-15 mm distantibus.

Folia opposita coriacea petiolata. Petiolus 6-12 mm longus supra anguste canaliculatus dense adpressoque albolanatus. Lamina ovato-oblonga basi subite angustata obtusa vel subobtusa apice attenuato-acutata margine obsolete dentata dentibus obtusissimis calloso-punctatis 1.5-5 cm longa 7-18 mm lata, supra viridis

valde strigosa subtus cinerea lana albida valde adpressa tegenti costa prominenti duobus nervis secundariis longitudinale ascendentibus notatis reliquis venulis minutum reticulum bene conspicuum formantibus.

Capitula radiata 3-4 cm diametentia (ligulis expansis) disco 1-1.5 cm diametenti 13-14 mm alto. Involucrum campanulatum basi umbilicatum 8 mm altum phyllariis circa 3-4-seriatis crasse herbaceis basi dorso calloso-incrassatis margine lanuginoso-ciliatis extus obscure nervatis vel sublaevibus subapicem glandulosis arachnoideisque vel lanuginosis reliquo subglabro, interioribus oblongis apice subite acutatis squarrosisque 7.5-8 mm longis circa 3 mm latis exterioribus similibus sed gradatim brevioribus mediis leviter ovato-oblongis ad 3.5 mm latis externis ovatis tantum ad 5 mm longis. Paleae receptaculi oblongae subite acutatae firme scariosae marginibus tenuioribus denique subcoriaceae obtusatae multivenosae plicatae dorso carinato flosculos involventes extus adpresse sericeo-puberulae 7.5-9 mm longae 4.5 mm latae.

Flores radii 10-12 ligulati neutri corolla lutea circa 14 mm longa tubulo 1-1.8 mm longo sparse pubescenti lamina oblonga conspicue 9-10-nervata apice obtusa minute tridenticulata 10-12 mm longa 3.8-5 mm lata extus praecipue in venis sericeo-pubescenti resinoso-granulataque; ovarium oblongum 3-4 mm longum sterile striatum glabrum; pappus 2-3 setis rigidulis strigosis 1.3-3 mm longis deciduis.

Flores disci hermaphroditi 28-54 corolla lutea circa 6.5 mm longa tubulo 1 mm longo limbo tubuloso sparse puberulo pilis crassiusculis brevibus copiosis dentibus triangularibus 0.8-1 mm longis incrassato-marginatis apice minutissime papillois. Antherae 3.6 mm longae nigrae obtuse sagittatae appendice apicale ovato-laceolata. Rami styli crassiusculi lineares obtusiusculi 2 mm longi recurvati intus stigmatopapillois extus sursum breviter papilloso-pilosi. Ovarium oblongum glabrum. Achaenium glabrum nitidum nigrum obovato-oblongum laterale subcompressum late bimarginatum parte mediali elevata (subquadrangularia) circa 3.5 mm longa 1.6 mm lata. Pappus 2-8 setis rigidis complanatis acutissimis strigosissimis valde caducis duobus marginalibus oppositis 3-4 mm longis, ceteris 1-3 mm longis aliquando deficientibus.

Typus: Peru, Dept Amazonas, Prov Chachapoyas: rocky slopes of Caño de Santa Lucía just E of Chachapoyas, 2200-2400 m alt, shrub 0.3-1 m, locally frequent, rays yellow, disc dark brown, 28 May 1962, J. J. Wurdack 584. Holotypus, US; isotypus, LIMA.

Pappobolus woodsonianus is a very characteristic species through its leaves which are rather small, firm, conspicuously reticulate beneath with a very compressed, cinereous, curled lanate tomentum which often makes a membranose-like surface. This thick, appressed indument distinguishes the species readily from the superficially very similar *Helianthus discolor* Bl. The kind of involucrum, paleae and especially the pappus distinguish the species from all other *Pappobolus*; it has generally up to 8 awns but they may be fewer, down to 2; these awns are narrow and strigose, like those in *Steiractinia* but here they are fewer and exceedingly deciduous. The variation in the number of awns, which, as I said before, often are

only two, and the type of achene bring this species very close to the South American *Helianthus*, but the shape of these awns makes the new species a *Pappobolus*. Blake wrote about this pappus: "The pappus awns are so extremely caducous as to render their exact enumeration very difficult"; and that is true.

This species is dedicated to the memory of the distinguished botanist and friend Robert E. Woodson.

Ascidiogyne Cuatr., gen. nov.

Capitula homogama discoidea parva. Involucrum cylindraceum phyllariis paucis plerumque 5 (4-7) biseriatis membranaceis. Receptaculum planum foveolatum nudum. Flores pauci (5-7) omnes hermaphroditi. Corolla campanulata symmetrice 5-lobata inferne in angustum tubum constricta. Antherae lobis ellipsoideo-oblongis exappendiculatis utrinque obtusis; filamenta glabra antherae aequilonga. Styli rami crassiuscule complanati oblongi apice paulo ampliato spathulato, marginibus $\frac{1}{3}$ - $\frac{1}{2}$ parte inferiori dense minutissimeque stigmatico-papilloso sursum breviter denseque papilloso (marginibus dorsoque). Achaenia atrobrunnea prismaticae 5-angulata faciebus sublaevibus. Pappus squamosus translucidis calyciformibus lobato-dentatus. Membrana translucida sacciformis ovarium (vel achaenium) pappumque adherens sed separabilis involvens. Herba reptante stolonifera caespitosa. Folia opposita. Capitula axillaria pedicellata. Species typica: *Ascidiogyne wurdackii* Cuatr.

Ascidiogyne wurdackii Cuatr., sp. nov.—Fig. 1.

Herba prostrata reptans stolonifera intricata caule herbaceo repente valde ramoso nodoso nodis radiceferis radicibus tenuibus subcapillaribus internodiis 1-3 cm longis glabris vel sparsis pilis pluricellularibus acutis flexuosisque, terminalibus brevibus foliis congestis subfasciculatis seu subrosulatis.

Folia opposita crassiuscule herbacea viridia petiolata. Lamina obovata vel ovata apice obtusa vel rotundata vel paulo attenuata basi cuneato-angustata vel subtruncata in petiolo elongata, margine 3-5-glandulato-dentata dentibus obtusissimis vel obsoletis glandulis immersis vel paulo prominentibus, 4-10 mm longa 2.5-7 mm lata, supra glabra subtus praecipue deorsum pilis crassiusculis longis multicellularibus munita, subtrinervis costa notata subtus pilosula duobus nervis basilari-lateralibus ascendentibus conspicuis alteris venulis lateralibus ascendentianastomosantibus plus minusve visibilibus vel inconspicuis. Petiolus planus basi paulo ampliata circa 2 mm lata subtus margineque longe ciliatus.

Capitula homogama discoidea tubulosa axillaria solitaria pedicellata 4.5-5 mm longa. Pedicelli teretes 2-14 mm longi erecti copiose patenti-pilosi pilis articulatis acutissimis patulis usque ad 1.5 mm longis.

Involucrum tubulosum viride 4-5 mm altum 3 mm diametente phyllariis membranaceis saepe 5 quincuncialis vel 6 biseriatis, raro 7 vel 4, obovato-ellipticis apice rotundato 3.5-4 mm longis 2-1.5 mm latis interioribus valde tenuibus translucidis margine sursum eroso-ciliatis reliquum glabrum exterioribus paulo crassioribus marginibus incurvatis extus plerumque parce pilosulis.

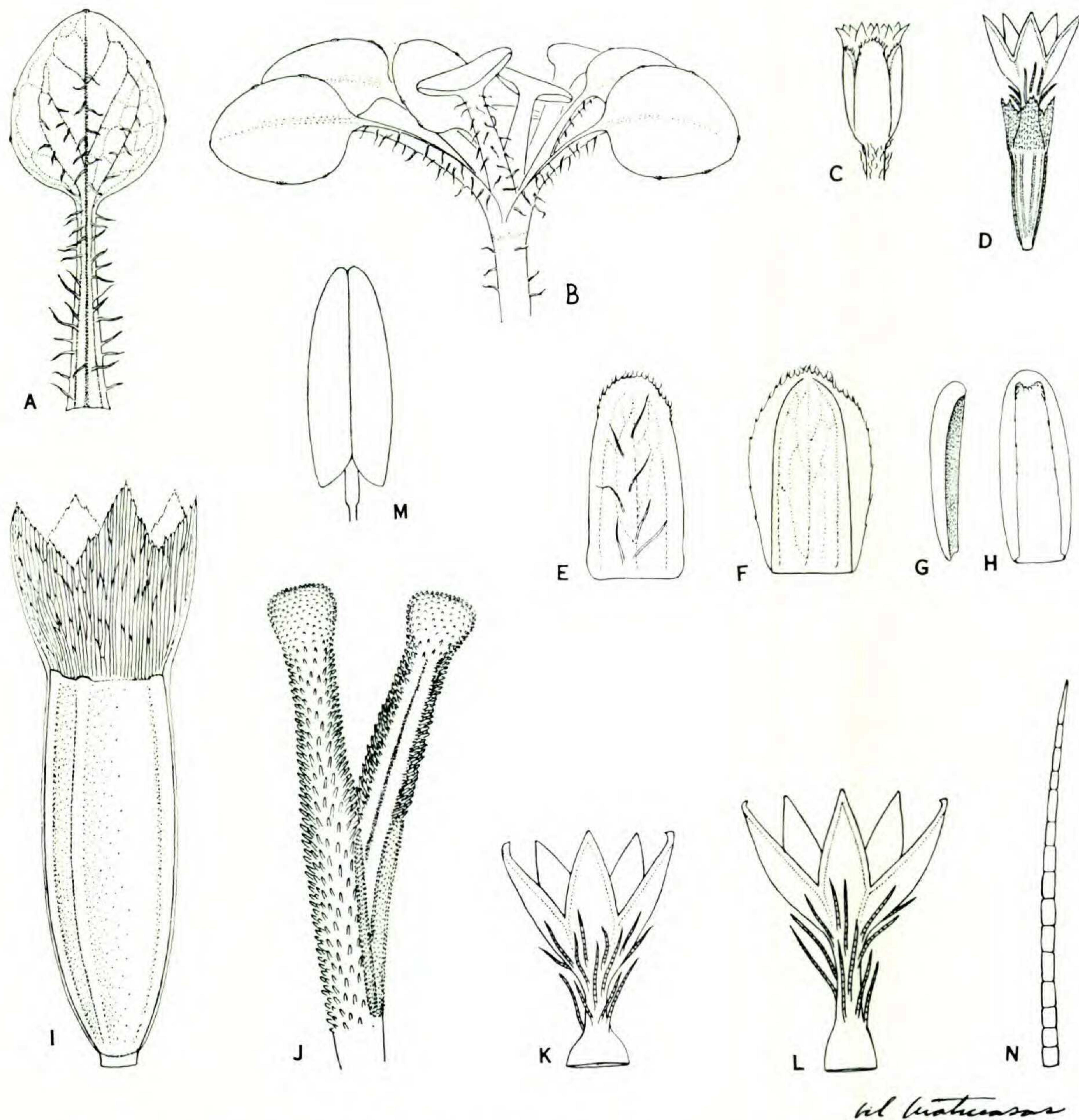


Fig. 1. *Ascidiogyne wurdackii*. A, adult leaf, underside, $\times 2.5$; B, terminal leafy branchlet, $\times 2.5$; C, head, $\times 2.5$; D, flower without stamens and style, $\times 6$; E, outer phyllary, F, inner phyllary, $\times 5$; G, lateral view of outer phyllary; H, inner view, $\times 5$; I, achene with pappus showing the pellicular covering membrane, $\times 20$; J, stylar branches, $\times 35$; K, L, corollas, $\times 10$; M, anthers, $\times 30$; N, hair of corolla, $\times 35$. From Wurdack 1716, 1246.

Flores omnes hermaphroditi plerumque 5 vel etiam 6-7 in capitulo raro 8. Corolla alba 2-2.6 mm longa tubulo angusto basi cupulato patente-piloso 0.6-1 mm longo pilis articulatis acutis erectis 1 mm longis limbo subcampanulato profunde lobato lobis aequalibus oblongo-triangularibus acutiusculis 0.8-1 mm longis crasse marginatis glabris sed apice incurvato minutissime papilloso. Antherae atrae lobis oblongo-ellipsoideis apice obtuso exappendiculato basi obtusis 0.7-0.8 mm longae. Filamenta nuda 0.6-0.7 mm longa. Stylus erectus 2.4-2.5 mm longus trunco glaber ramis 1.2-1.3 mm longis crassis paulo complanatis marginibus incrassatis $\frac{1}{2}$ - $\frac{1}{3}$ inferiori minute papilloso-stigmatiferis superne paulo angustatis marginibus dorso-

que breviter papilloso apice paulo ampliato rotundato-spathulato minute denseque papilloso; basi styli cum annulo crasso hemisphaerico cincta. Ovarium argute 5-angulatum faciebus laevibus glabris 1.6-1.7 mm longum. Pappus circa 1 mm altus membranoso-scariosus calyciformis inaequaliter 5 lobatus lobis acutis plus minusve denticulatis. Achaenia circa 0.8 mm longa prismatico 5-angulata faciebus sublaevibus minute subgranulatis atro-brunnea. Ovaria et achaenia pappus inclusus cum vesicula pelliculoidea translucida adherenti sed separabili omnino involuta. Receptaculum planum nudum.

Typus: Peru: Dept Amazonas, Prov Chachapoyas: uppermost slopes and summit of Cerros de Calla-Calla, nr kms 403-407 of Balsas-Leimebamba road, 3400-3550 m alt, locally frequent on moist banks, flowers white, 18 Aug 1962, J. J. Wurdack 1716. Holotypus, US. Ibidem in open cold swamp on summit of Cerros de Calla-Calla between Leimebamba-Balsas road pass and the *camino de herradura* (2 hours walk south), 3500-3750 m occasional, corollas white, 8 July 1962, J. J. Wurdack 1246. Paratypus, US.

Ascidiogyne is a member of the *Eupatorieae* subtribe *Piquerinae* Hoffm. Its closest relationship is with the West Indian genus *Phania* from which it differs by its pappus with its five broad scales united in a calyx-like shape and by the smaller number of flowers and phyllaries, these being broader. But the main character of *Ascidiogyne* which distinguishes it from all other *Piquerinae* is the presence of a sack like transparent pellicle tight around the ovary and pappus, persistent on the fruit. The vesicular membrane is born on the callus at the base of the ovary and can be easily removed. The name given to the genus refers to this sack.

From the recently described Peruvian genera of *Piquerinae*, *Ferreyrella* and *Ellenbergia*, the new genus *Ascidiogyne*, besides its ovarium sack, differs from the first by the absence of receptacular paleae and pappus, by the actinomorphic corolla, pauciflorous heads and cespitose habit; from the second, it is well distinguished in the habit, the shape of the corolla, the style, and the pappus.

Vernonia jalcana Cuatr., sp. nov.

Frutex 0.5-1.5 m altus ramis densis erectis vel ascendentibus terminalibus dense foliatis striatis ochroleuco-cinereis dense adpresseque pubescenti-tomentosis.

Folia alterna petiolata coriacea rigidula. Lamina elliptico-lanceolata basi obtuse cuneata vel obtusa apice angustata subacuta vel obtusa brevissime callosomucronulata margine integra plana, 2.5-5 cm longa 0.6-3 cm lata, supra luteo-viridis scrobiculata costa dense pubescenti conspicua nervis secundariis parum visibilibus, subtus ochroleuca vel ochracea dense adpressissime pubescenti-tomentosa copiosis granulis glandulosis nitidis intra indumentum conspicuis costa elevata nervis secundariis subpatulis 7-9 utroque latere prominulis prope marginem arcuato-anastomosantibus venulis minoribus saepe inconspicuis. Petiolus crassus 4-5 mm longus dense pubescens supra planus basi incrassatus.

Inflorescentiae subcorymboso-paniculatae rotundatae terminales folia suprema excedentes ramis ramulisque ascendentibus argute angulatis ancipitatis dense adpresseque tomentoso-pubescentibus ebracteatis, capitulis densis saepe glomeratis

3-5 in extremo ramusculorum sessilibus vel subsessilibus pedicellis usque ad 1 mm longis vel pseudo-pedicellis (ramulis unicapitatis) ad 5 mm longis. Capitula tubulosa 8-10 mm longa circa 2.5 mm lata. Involucrum tomentellum 6.5-7.5 mm longum phyllariis 5-6-seriatis subscariosis apicem versus glanduloso-granulatis extus dense pubescentibus interioribus oblongo-lanceolatis 5-6 mm longis 1.2-1.5 mm latis apice acutatis, mediis oblongo-ovatis acutis ad 2 mm latis, exterioribus basalibus ovatis subite acutatis vel obtusatis 2-1 mm longis latisque. Flores 3 in capitulo, corolla purpurascenti vel lilacina circa 8 mm longa tubuloso infundibuliformi sparse glanduloso-granulata tubulo circa 1.5 mm longo lobis linearibus acutatis incrassato-marginatis extremo extus dense glanduloso-granulatis. Antherae 3 mm longae sagittatae caudicibus obtusiusculis coalitis. Filamenta glabra. Stylus ramis lineari-subulatis 2-2.5 mm longis extus hispidulis parte integra sursum (1 mm longitudine) hispidulus ceteris glaber. Ovarium 1.5-2 mm longum oblongum argute 10-costato-sulcatum in sulcis glanduloso-granulatum basi crasse callosum. Pappus albus 5.5-7 mm longus setis basi coalitis interioribus capillaribus minute strigulosis exterioribus brevibus tenuioribus acutis circa 1 mm longis (0.5-2 mm). Receptaculum breve (0.7-0.8 mm diam) convexum nudum.

Typus: Peru, Dept Amazonas, Prov Chachapoyas: Jalca zone 1-5 km W of Molinopampa 2400-2450 m alt, shrub 0.5-1.5 m, frequent, heads lilac, 18 July 1962, *J. J. Wurdack 1359*; Holotypus, US; isotypus, LIMA. Prov Bongará: Jalca zone 3 km S of Pomacocha, E of Shipasbamba trail, 2400 m, shrub 0.5-1.5 m, frequent, flowers purple, 20 June 1962, *J. J. Wurdack 971*. Paratypi, US, LIMA.

Vernonia jalcana is an outstanding species of the section *Critoniopsis* well distinguished by its rather small, coriaceous leaves which are glabrous and scrobiculate above and densely villous-tomentose beneath, by its almost corymbose panicles, by its pubescent involucre and by other details of the flowers.